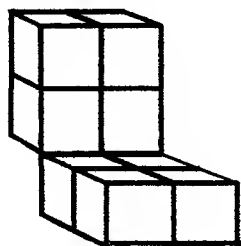


## FLEX-A-CUBE



PHILIP NOBLE

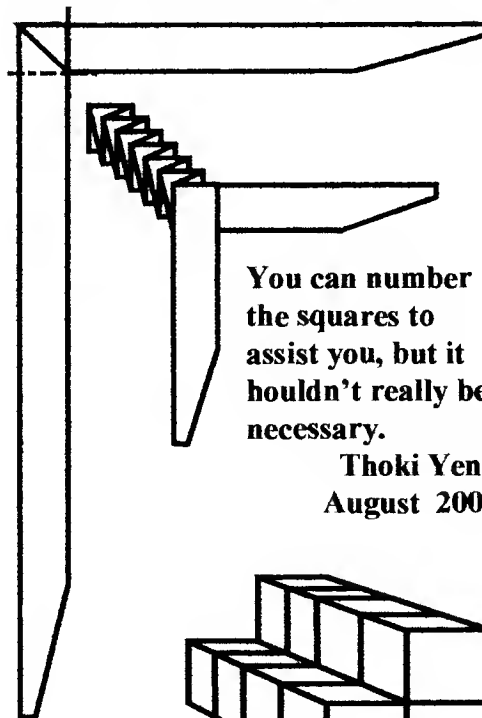
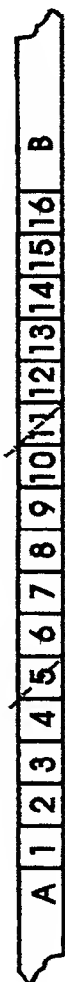
This little wonder of a toy is designed by Philip Noble, Scotland.

Soon it will be 20 years ago since I saw the instructions by Paul Jackson in the booklet FLEXAGONS, which is No. 11 in the series of BOS booklets. An Italian description can be found in the book: CONTRO MOSSA by Luisa Canovi, and in Dec.92 Ernst Blauenstein made a description in "DER FALTER" No. 10 in German, and now it is here translated into English from The "Danish Origami Center" No. 4.

Get a roll of TELEX STRIP, (I got my supply from the Post & Telegraf Customer Service: Rolls of 100 meter, 18 mm wide - you call it ticker tape).

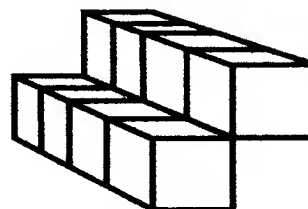
Practice to fold a single cube from a strip about 50 cm long. When you can do this without any difficulties, then you can prepare a strip 2.50 to 3 meter long by folding it into exact squares by the so-called mouse-ladder technique. For those few unhappy persons who do not know the mouse-ladder I give a short explanation: The strip is folded sharply in half. Hold it vertically. Left edge is twisted and laid precisely into the the sharp fold. pres flat. If you have done this right you have a precise diagonal in a square 18x18 mm, turn the thing so that this diagonal is away from you. Now alternatively fold the horizontal and the vertical in over each other, be precise in aligning the squarrs on top of each other until the strip is nearly used up. Cut the ends to form a long point.

It takes 16 squares per cube. 8 cubes is  $16 \times 8 = 128$  squares plus a few more for the lock. The strip is 1.8 cm wide, so you need  $128 \times 1.8 = 234$  cm, but it is good to have a little extra lenght, ca. 300 cm. When you have made the precise mouse-ladder you unravel it again. You are now ready to start. The diagonal in the middle of the strip is considered as no. 5, go on counting 6-7-8 & 9-10-11. In square No. 11 fold a diagonal parallel with the one in no. 5, but opposite action, ie. if 5 is a valley, then 11 must be a mountain fold.

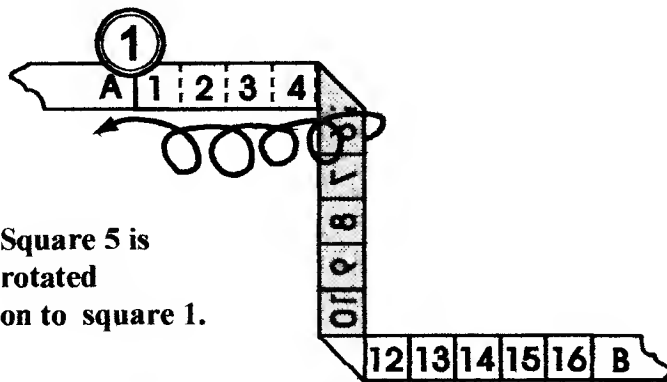


You can number the squares to assist you, but it shouldn't really be necessary.

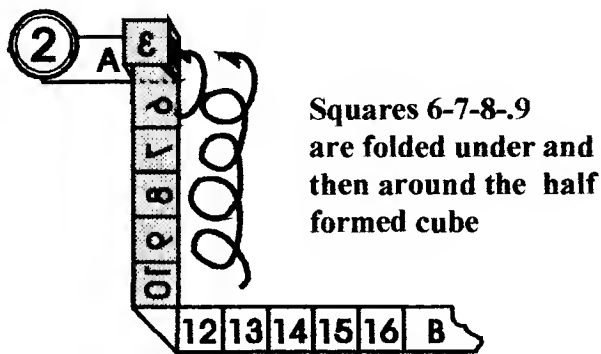
Thoki Yenn  
August 2000



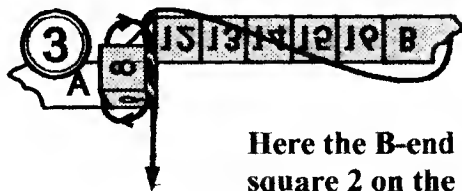
## First learn how to fold a single cube.



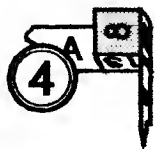
Square 5 is rotated on to square 1.



Squares 6-7-8-9 are folded under and then around the half formed cube



Here the B-end is put under square 2 on the right side of the cube, then over 9 at the lower side, under 4 on the left and over 7/11 and under 2 again



First cube complete.

When serious folding starts, fold the first cube in the middle of the 3 meter long strip

The diagonals are always placed in squares no. 5 and 11 of the 16 squares that are used for each cube.

The diagonals are always parallel but folded as valley and mountain, depending on where the hinge to the next set has to be placed.

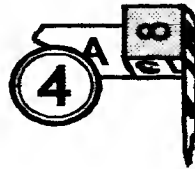
Numbers on both sides of the rehearsal strip makes it easier to follow the diagrams.

On the drawings on the following pages the numbers are merely decorations.

OBS: If your numbering is oriented as on my drawings then the connection to the next set comes out at the foot of the figure 2.

## The first two cubes: SET No. 1

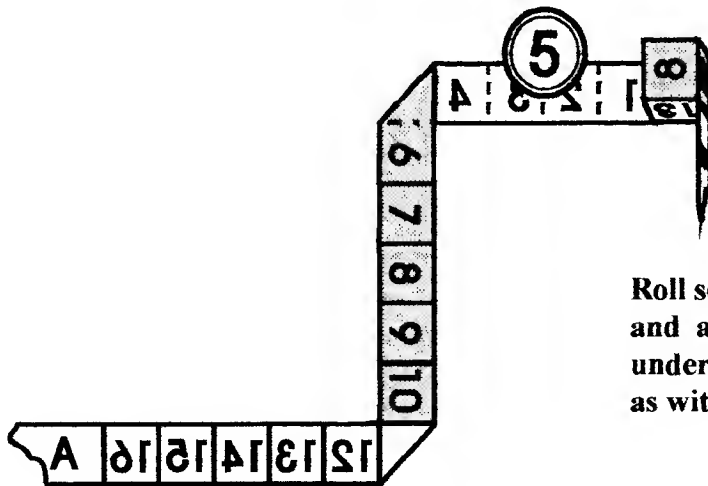
Drawing no. 4 is repeated here as a memory help.



In Fig. 5 you see it here as the first cube on the B side of the strip.

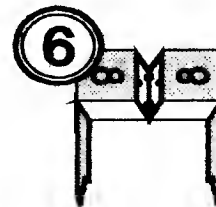
The A side of the strip is shown here with the diagonals folded in squares 5 and 11 put in square

**OBS: The diagonal in square 5 is folded so that the strip with the 6-7-8-9-10 squares are pointing the same direction as the neighboring cube.**



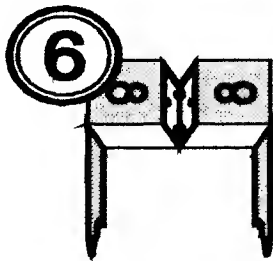
Roll square 5 on to square one and squares 5-6-7-8-9-10 under and around and go on as with the first cube on the B-side.

In Fig 6 you see the strips coming out of the cubes in the same direction



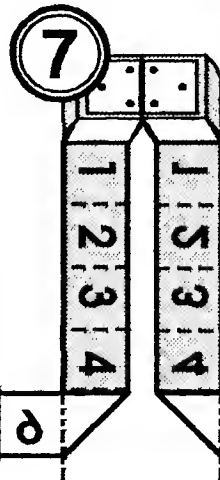
## The next two cubes. SET No. 2

Drawing 6 is repeated here supplied with drawn on hinges.

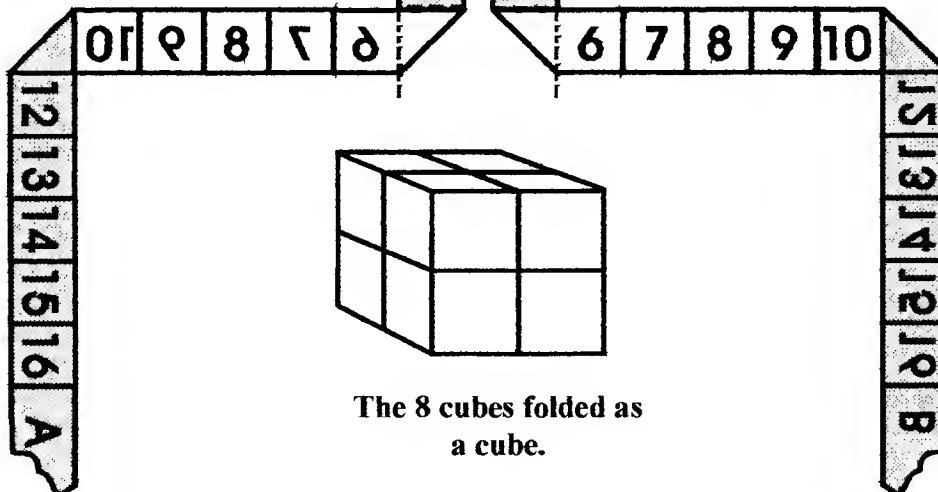


Open the hinges so that the strips  
are placed flat on the table  
and the hinges on top

Fold the diagonals in the squares 5 and 11 on both  
the A side and the B-side  
You already know where the strips will come out of these cubes.  
namely at the sides



The sequence is:  
Hinges on top in the first set  
hinges at the sides by the second set  
hinges at the bottom by the third set.



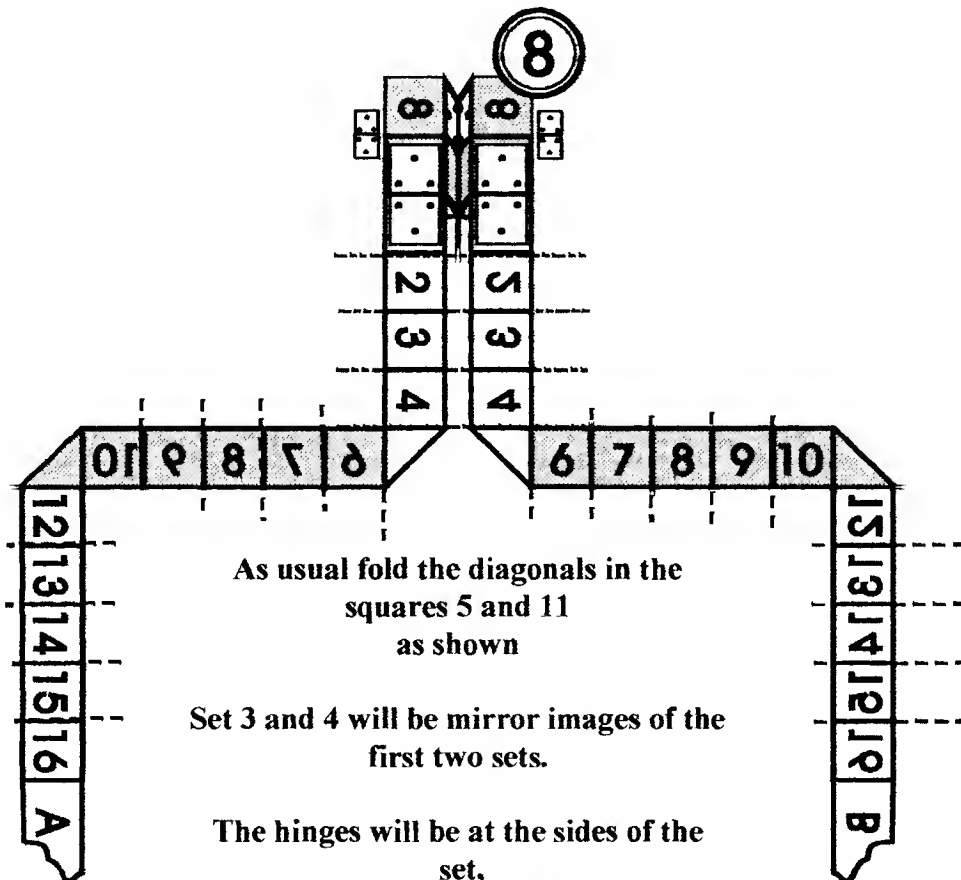
Fold both the  
cubes  
in SET No. 2

The 8 cubes folded as  
a cube.

## The next two cubes. SET No. 3

Close the hinges on the first set.

That will place the strips  
at the upper edge of the cubes



As usual fold the diagonals in the  
squares 5 and 11  
as shown

Set 3 and 4 will be mirror images of the  
first two sets.

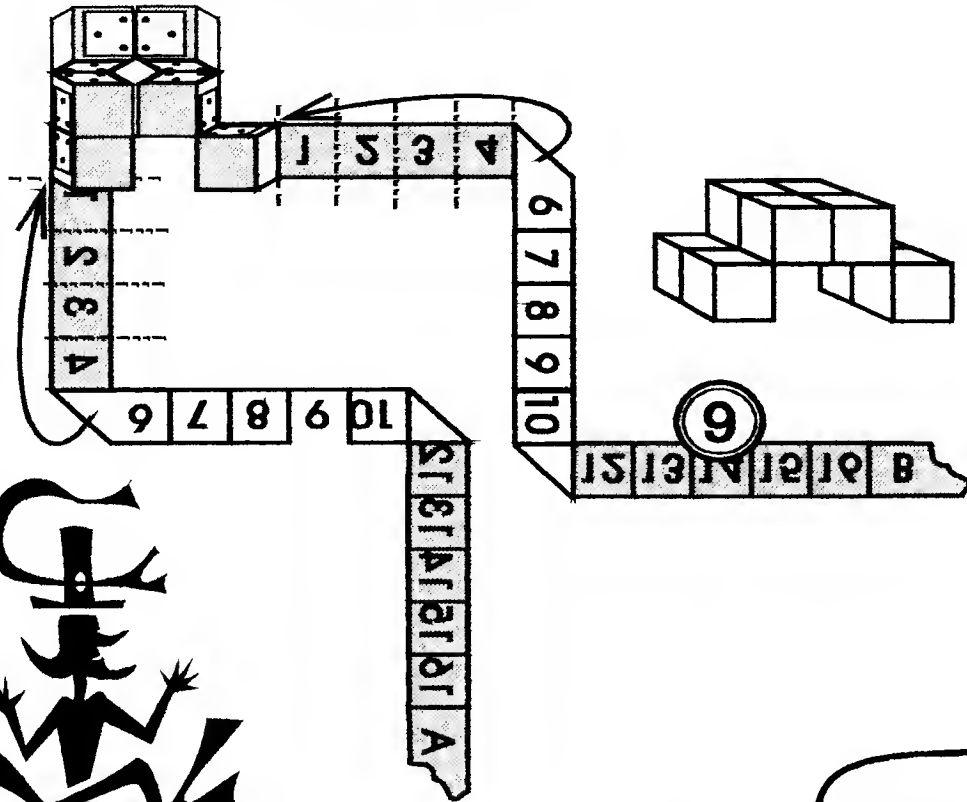
The hinges will be at the sides of the  
set,  
that is why the diagonals in 5 make the 6-7-  
8-9-10  
part of the strips point that way.

At the No. 4 and last Set there is a slight  
change in the procedure

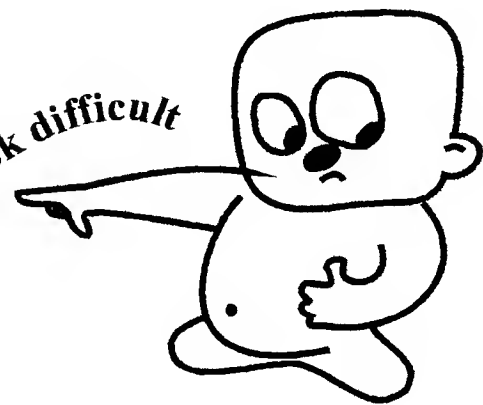
Go to Drawing Fig. 9

## The fourth and last SET

So that the higes on the last set can arrive at the top  
it is necessary this time  
to fold the cubes the other way around  
by rolling the squares  
so that the diagonal in square 5  
goes behind the first square on the strips



He is just doing it to make it look difficult

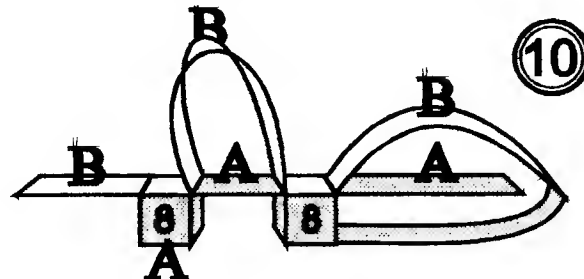


Go to next page for the lock

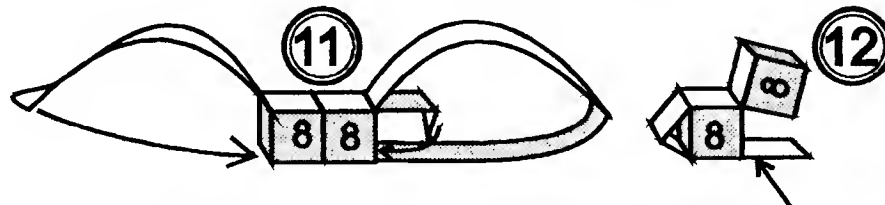
# THE LOCK.

Only the last two cubes are shown

The final loop on the B-Side is not pulled tight,  
if you have done it, push it out into a rather large loop  
as shown in Fig. 10.



Pass the the end of the A. side strip under the  
B strip so the the A-end is going into the B Loop  
and pass the free end of the B strip under the top layer of the A Cube.  
As I have attempted to Show in Drawing No. 10.



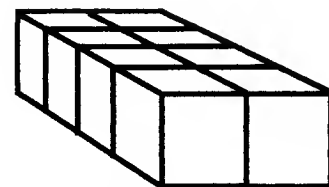
Hold the B loop open while you pull the strips  
to make the cubes go together  
as in Fig. 11.

Cut the end off at the A strip leaving 2 squares  
and cut the end to form a point  
that you can push back in under the cube,  
then tighten the loop.

The last loose end is passed under the lower edge of the A Cube,  
as in Fig 12..

Tighten and cut off close.

## CONGRATULATION



MAKE MANY OF THEM AND MAKE MANY PEOPLE HAPPY,  
or even better, teach them how to do it.